

Draft Environmental Assessment
Threemile Wildlife Management Area
Forest Habitat Restoration Project

February 2015



**Montana Fish,
Wildlife & Parks**

Project Overview



Figure 1. Entrance sign at the north edge of the proposed forest habitat improvement project.



Figure 2. Radio-collaring elk in Winter 2014 on the south end of the Threemile Wildlife Management Area, outside of the proposed habitat improvement project.

Proposal

Montana Fish, Wildlife & Parks (FWP) proposes to thin up to 400 acres of forest on the Threemile Wildlife Management Area (WMA), in Ravalli County (Figure 3). If approved by the Montana Fish and Wildlife Commission, the work would begin as early as June 2015 and extend into the winter months of 2015-16. Forest management activities would not occur during the general hunting season. The purpose is to improve wildlife habitat; this project would not be proposed if not for a need to conserve and improve wildlife habitat on the WMA.

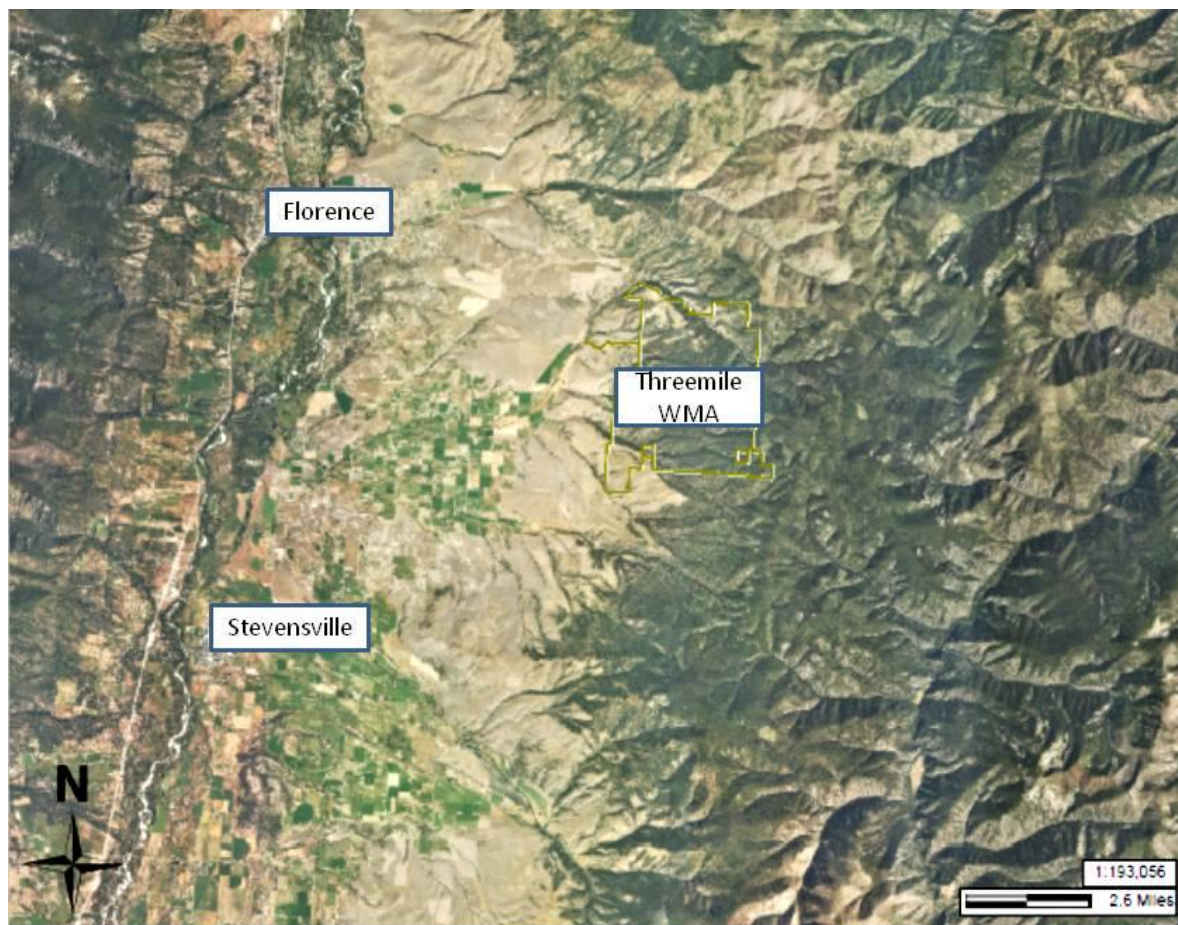


Figure 3. Location of the Threemile Wildlife Management Area in relation to the towns of Florence and Stevensville, in the northern Bitterroot Valley.

Area Description

FWP acquired the Threemile WMA in 1967 to provide winter range for elk that were restored to the Sapphire Mountains earlier in the twentieth century. FWP's management plan for Threemile WMA sets wildlife and wildlife habitat as its first priority, and public access compatible with wildlife needs is second. Most of the 6,169-acre WMA is forested (Figure 3), and the forest is residual or regenerated after logging that occurred 40 years ago by the private owner of now-expired timber rights. Forest management has not occurred since that time.

Ecological Setting

Robert M. Rich conducted his master's research on Threemile WMA, and found quantifiable evidence in General Land Office survey notes from 1902 that the stand structure and ecology of the current forest has changed dramatically from the historic conditions that shaped the evolution of native wildlife species (Rich 2011; Figures 4 and 5).

Historic timber harvest practices, fire exclusion and the lack of forest management in recent decades have set the stage for a potential long-term loss of wildlife and wildlife habitat on the Threemile WMA. Of foremost concern is the increased likelihood of a stand-replacement event when a wildfire occurs in the future. This forest evolved with a

natural cycle of frequent, low intensity, ground fires that minimized stand replacement events and promoted the retention and recruitment of large trees in open stands (Rich 2011; Figure 4). Decades of fire prevention and suppression, coupled with historic, high-grade harvesting and a lack of subsequent management to restore a natural stand structure, have increased the vulnerability of the forest to fires that once burned beneficially (Rich 2011; Figure 5). FWP would like to thin some forest stands in the coming months to increase the

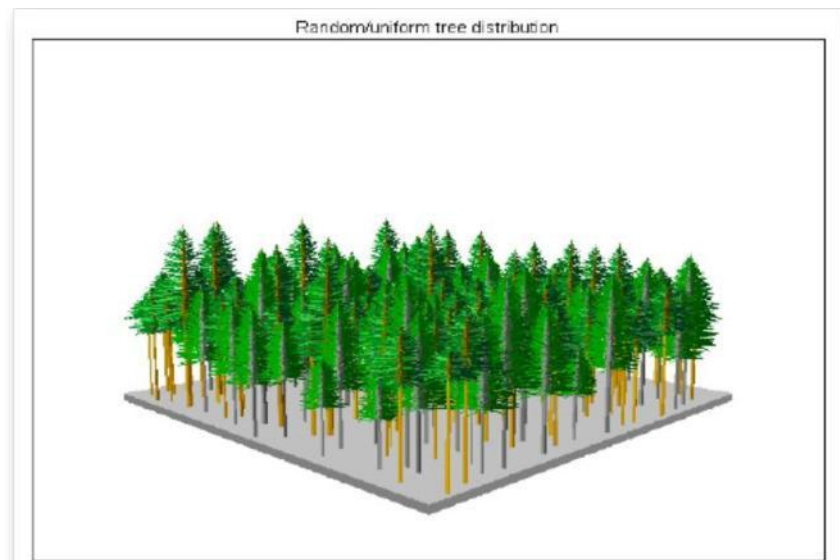


Figure 9. Stand visualization showing the dense stand condition in 2007, when there was an average of 202 trees per acre, a basal area of 204 ft²/acre, and a quadratic mean diameter of 13" (at 1-ft above ground level)

Figure 5. Reprinted from Rich (2011, p. 42): modeled, current, forest structure on Threemile Wildlife Management Area.

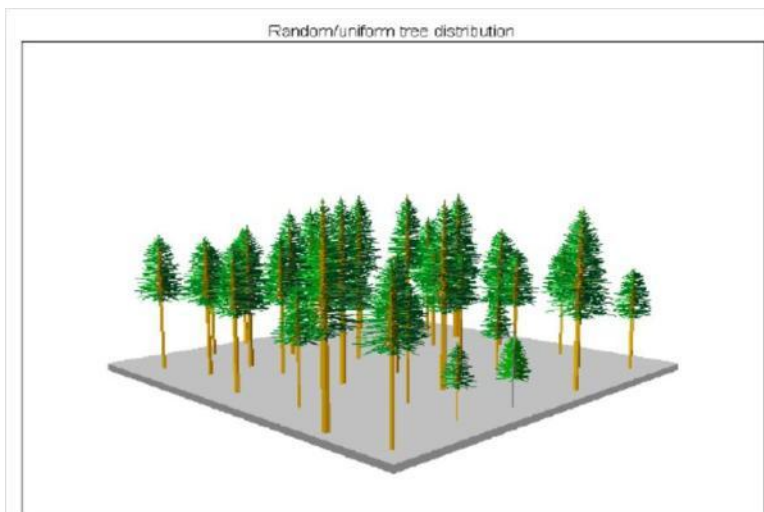


Figure 8. Stand visualization showing the open-grown stand conditions in 1902, when there was an average of 37 trees per acre, a basal area of 82 ft²/acre, and a quadratic mean diameter of 20" (at 1-ft above ground level)

Figure 4. Reprinted from Rich (2011, p. 41): modeled, historic, forest structure on Threemile Wildlife Management Area.

probability of larger trees surviving the inevitable lightning or human-caused fire in the future. Otherwise, a wildfire is likely to burn much hotter than would have naturally occurred, reaching the forest canopy and more deeply into the mineral soil, thus removing most or all of the existing forest structure, to the detriment of many wildlife species on the WMA.

Wildfire Event of August 29, 2014

The recommended forest management project is not intended to significantly reduce or eliminate fire risk—wildfire is natural and inevitable—but is intended and would be designed to improve the survival rate of the larger trees in the event of a fire. A fire started on Threemile WMA on August 29, 2014, coincidentally as FWP was developing this proposal (Figure 6). The U. S. Forest Service responded immediately with 3 helicopters, 2 single-engine air tankers and ground crews, joined by engines from the Stevensville, Florence and Three Mile rural fire departments. This effective initial attack, aided by weather conditions favorable for suppression, resulted in the burn being contained to 48 acres, of which about 18 acres fell within the perimeter of this proposed forest management project. This latest event, and others before it, remind us that the Threemile WMA has attracted repeated fire starts in recent decades, and that we, the public, cannot expect fire fighters to always be as fortunate and effective as they have been to date. This most recent fire stayed on the ground, though it is too early to tell whether most trees will survive (Figures 7 and 8).

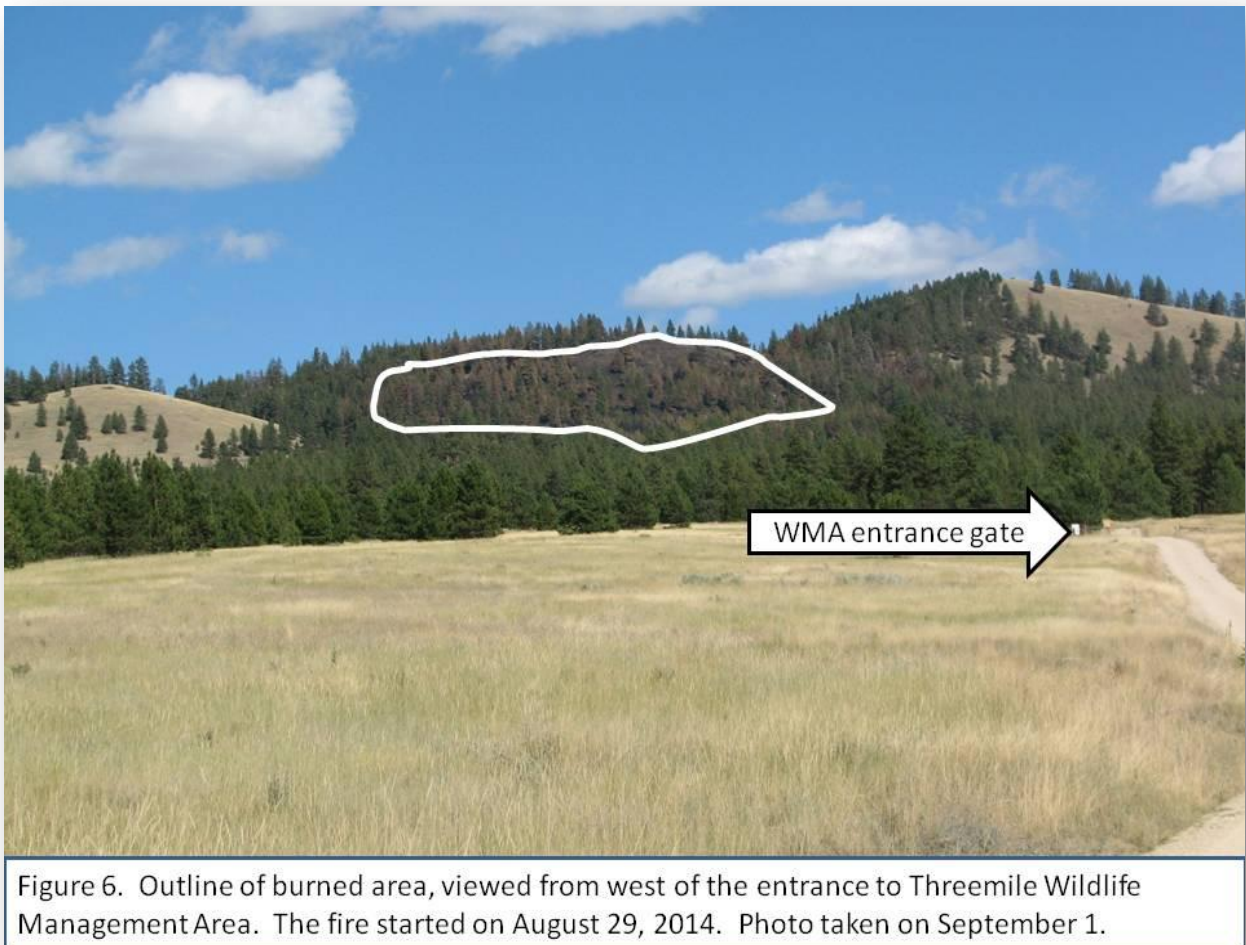




Figure 7. Site that burned on August 29, 2014 on the Threemile Wildlife Management Area. Photo taken on September 1.



Figure 8. Bark char and initial canopy effects on a site that burned on August 29, 2014 on the Threemile Wildlife Management Area. Photo taken on September 1.

Moisture Regime

FWP intends to increase the availability of scarce surface and subsurface moisture to enhance forest features that contribute the most to wildlife habitat. Increased stand density on the dry west, southwest and south-facing slopes of the WMA creates moisture stress that inhibits the growth and recruitment of old, large ponderosa pine and Douglas-fir trees—those features of importance as elk thermal cover in winter and as living or future-dead wildlife trees (snags). Aspen, upland willow and other deciduous trees and shrubs, which add habitat and wildlife species diversity, are being shaded out by the increasing conifer densities on some sites (Figures 9 and 10). FWP would prescribe thinning in a pattern that would promote moisture delivery in stands with the greatest growth and survival potential, and in places where aspen and other deciduous plants would benefit from thinning the forest canopy and disturbing the plants themselves to promote sprouting.



Figure 9. Swale immediately above the aspen trees in Figure 10, where conifers would be thinned to release more water and expand the footprint of the existing aspen stand for wildlife.



Figure 10. Aspen stand that would be the source of aspen expansion onto the site shown in Figure 9.

Dense Cover

Equally important as the treatment are the stands within the project area that would not be treated (Figure 11). Forests in the riparian bottoms and on steep, north-facing slopes along the draws would be left standing, including a mix of larger Douglas-fir and spruce, and thickets of shrubs and shade-tolerant conifer regeneration. These important features of the overall wildlife habitat would remain irregularly interspersed with treated stands to maintain a functional mosaic of forest structures for a diversity of wildlife. Among other values, these stands are used by elk for winter thermal cover, and in combination with large pine and Douglas-fir boles on the adjacent, south-facing slopes provide diverse habitats in close proximity, which allow wintering elk to minimize their exposure to wind or maximize their exposure to the sun and reflected solar radiation, as conditions vary (Beall 1974).



Figure 11. Example of a densely forested draw in proposed Unit 4 that would not be treated.

Demonstration Project

FWP proposes to begin forest management on a small scale, with the idea that this initial treatment would serve as a demonstration for FWP to evaluate and learn from, and for the public to react to, before proposing any further forest management projects on Threemile WMA in the future. FWP would involve only about 500 acres—about 10% of the forested acres on the WMA—in this demonstration (which includes untreated acres within the project area). The project area would be contiguous and blocked in the north half of the WMA, which would

minimize and confine the operational disturbance and leave most of the WMA unaffected (Figure 12). Any future forest management projects would be proposed and released for public review and comment at a later date, and no-action would remain a viable alternative at that time.

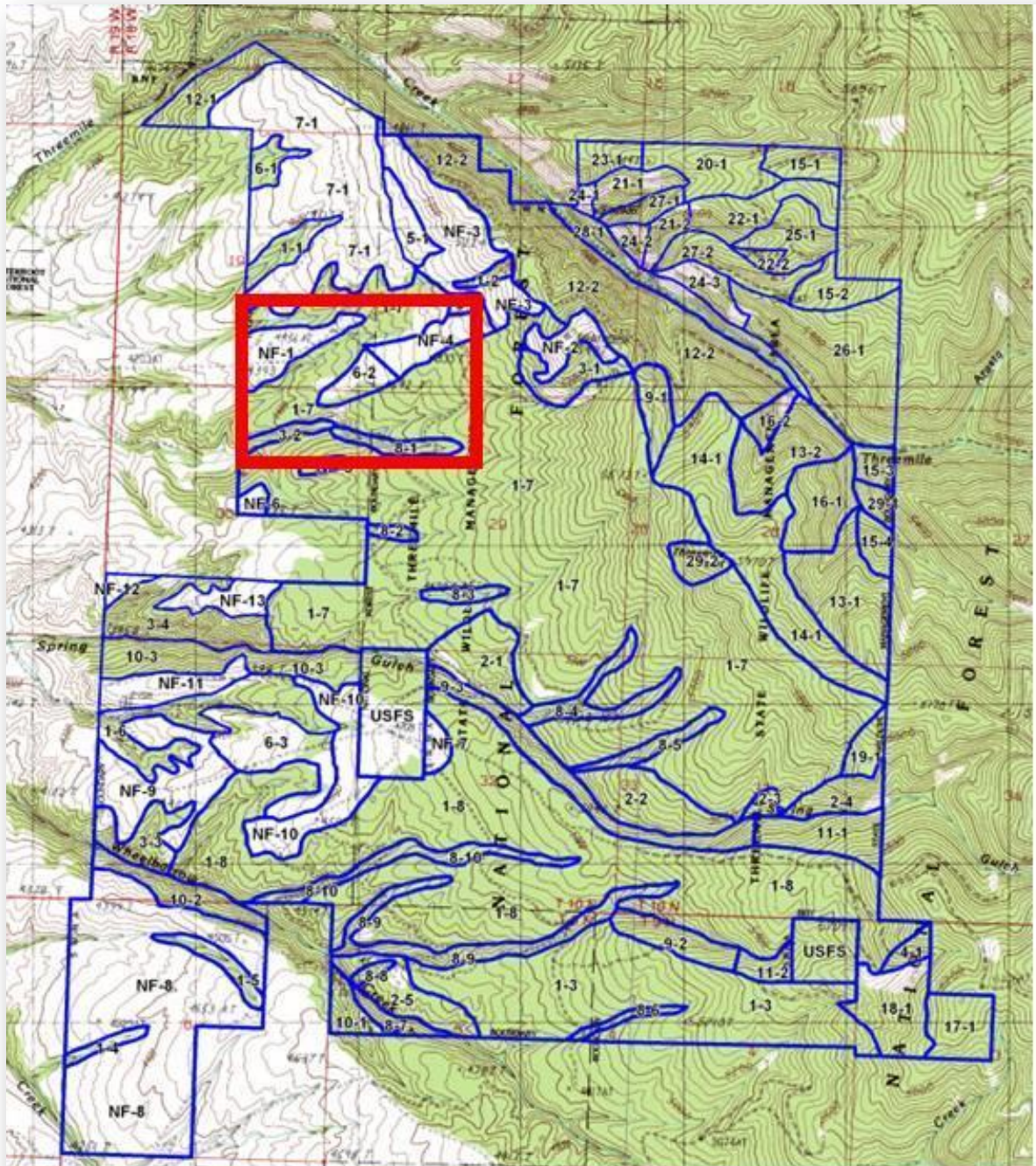


Figure 12. Relative location (red box) of the proposed forest habitat improvement project within the boundary of the Threemile Wildlife Management Area.

Partnership with DNRC

As the habitat manager, FWP would decide which trees would be removed, and which would be left standing, along with all other aspects of the forest management prescription. However, FWP has developed this proposal in partnership with the Montana Department of Natural Resources and Conservation (DNRC) and its Forestry Assistance Program to incorporate the professional forestry expertise that exists there. The role of DNRC foresters has been to hear FWP's purposes and goals, and to translate them into forest management prescriptions that are silviculturally sound and feasible. Project development has been a continual process of trial and feedback, and trial again, to meet wildlife needs and address wildlife opportunities first (Figure 13). If the Fish and Wildlife Commission ultimately approves a final project proposal this winter, a DNRC forester would serve as the project administrator—in the field and in day-to-day contact with the tree-harvesting contractor—to ensure that the management prescription is followed and that any issues are addressed as they arise.



Figure 13. DNRC Service Forester, Kurt Gelderman, along a segment of proposed new road construction on the Threemile Wildlife Management Area.

Draft Environmental Assessment MEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action:

FWP proposes to thin up to 400 acres of forest on the Threemile Wildlife Management Area (WMA), in Ravalli County (Figures 3 and 12). If approved by the Montana Fish and Wildlife Commission, the work would begin as early as June 2015. The purpose is to improve wildlife habitat; this project would not be proposed if not for a need to conserve and improve wildlife habitat on the WMA. Please see #9, below, for a detailed description of the proposed action.

2. Agency authority for the proposed action:

The land subject to this proposal is included in the Threemile Wildlife Management Area (WMA), which was originally purchased in 1967 with Federal Aid in Wildlife Restoration monies administered by the U. S. Fish and Wildlife Service under the authority of the Pittman-Robertson Act (P-R). Matching funds for acquisition of the WMA were provided by FWP from revenues generated by the sale of Montana hunting licenses. FWP uses budgeted license revenues, within spending authority granted each biennium by the Montana legislature, for maintenance of the WMA. FWP is authorized to use supplemental funds from various public and private sources, which may be awarded under specific conditions for individual maintenance and enhancement projects on the WMA and other properties.

Threemile WMA Management Plan (1992)

FWP initially established the Threemile WMA by purchasing and exchanging lands from 1967 through 2009 for the purpose of protecting wildlife habitat and carrying on wildlife restoration projects in accordance with P-R. More specifically, FWP manages this property primarily to provide important winter range for elk and deer, as outlined and described in the Application for Federal Assistance and the Management Plan for the Threemile WMA (on file at FWP, Region 2). The Management Plan directs FWP to “restore and sustain the natural productivity of the ponderosa pine/bunchgrass/riparian ecotone extending from Threemile Creek to Ambrose Creek, including Threemile WMA and adjacent ownerships, to retain a wide variety of potential management alternatives for future generations. For the expected 10-year life of this plan, as in the past under DFWP ownership, provide high-quality winter range for elk and mule deer, as well as compatible public recreational opportunities.”

The Threemile WMA Management Plan directs the Department to pursue opportunities to enhance these resources when compatible with elk and deer management. This proposed Project would meet these standards by maintaining and recruiting thermal cover—in the long term—to address a habitat limitation in periods of harsh winter weather for migratory populations of 300 elk. This proposed project would maintain and enhance woody browse understories and aspen stands that historically provided winter forage for mule deer and elk on the lower slopes of the Sapphire Mountains, but have been severely degraded by conifer encroachment and fire suppression over the last 40 years.

The proposed forest management project addresses, in part, the “Forest Management Problem” that was outlined in the Threemile WMA Management Plan as follows: “Nearly 20 years after logging last occurred on Threemile WMA, forests are at varying stages of recovery and ‘maturity.’ Commercially valuable timber is present on the WMA. DFWP desires to develop objectives regarding the type of forest structure(s) that best meet WMA goals for wildlife and to subsequently develop appropriate management strategies that might include prescribed timber harvest. To clarify, wildlife management objectives, rather than the commercial value of the timber, should be the primary consideration in evaluating any future timber harvest options on the WMA.”

87-1-201(9) (iv) and 87-1-621 MCA

FWP is required to implement programs that address fire mitigation, pine beetle infestation, and wildlife habitat enhancement giving priority to forested lands in excess of 50 contiguous acres in any state park, fishing access site, or wildlife management area under the department’s jurisdiction. FWP, in conjunction with DNRC, has identified habitat improvement priorities following extensive field work, literature review, and conversations with WMA users and neighbors over the past decade. The Montana Legislature has provided FWP the means to accrue revenue from forest management activities and spend them to fund further management projects on its forested lands.

23-1-126 MCA, The Good Neighbor Policy of Public Land Use

As applied to public recreational land, The Good Neighbor Policy seeks to limit impacts to adjoining private and public land from noxious weeds, trespass, litter, noise and light pollution, streambank erosion, and loss of privacy.

The Montana Statewide Elk Management Plan (2005)

The Montana Statewide Elk Plan directs FWP to improve elk habitat through projects designed to improve vegetative diversity and to maintain or increase carrying capacity on winter range. This proposed project would work toward meeting this goal by restoring aspen stands, removing shade tolerant conifers encroaching on historically open and fire adapted ponderosa pine stands, increasing recruitment of grass and woody browse understories in treated stands, removing late seral and diseased pine and Douglas-fir, and reducing the probability of intense stand replacement fire events on the WMA.

Montana’s Draft State Wildlife Action Plan (2014)

The Threemile WMA is included within the Lolo-Clark Fork Connectivity, Tier One Focal Area. Priority species for that Focal Area, which would be relevant to the management of Threemile WMA, include the Black-backed Woodpecker, Boreal Chickadee, Brewer's Sparrow, Brown Creeper, Cassin's Finch, Clark's Nutcracker, Flammulated Owl, Gray-crowned Rosy-Finch, Great Gray Owl, Northern Goshawk, Pileated Woodpecker, Varied Thrush

3. Name of project:

Threemile Wildlife Management Area Forest Habitat Restoration Project

4. Anticipated Schedule:

Estimated Commencement Date: 6/01/2015

Estimated Completion Date: 3/1/2016
Current Status of Project Design (% complete): 100%

5. Location affected by proposed action (county, range and township):

Ravalli County;

Township 10 North, Range 18 West, Section 19, 20, 29, 30.

Project is located within the Threemile Wildlife Management Area (Figures 14-16).

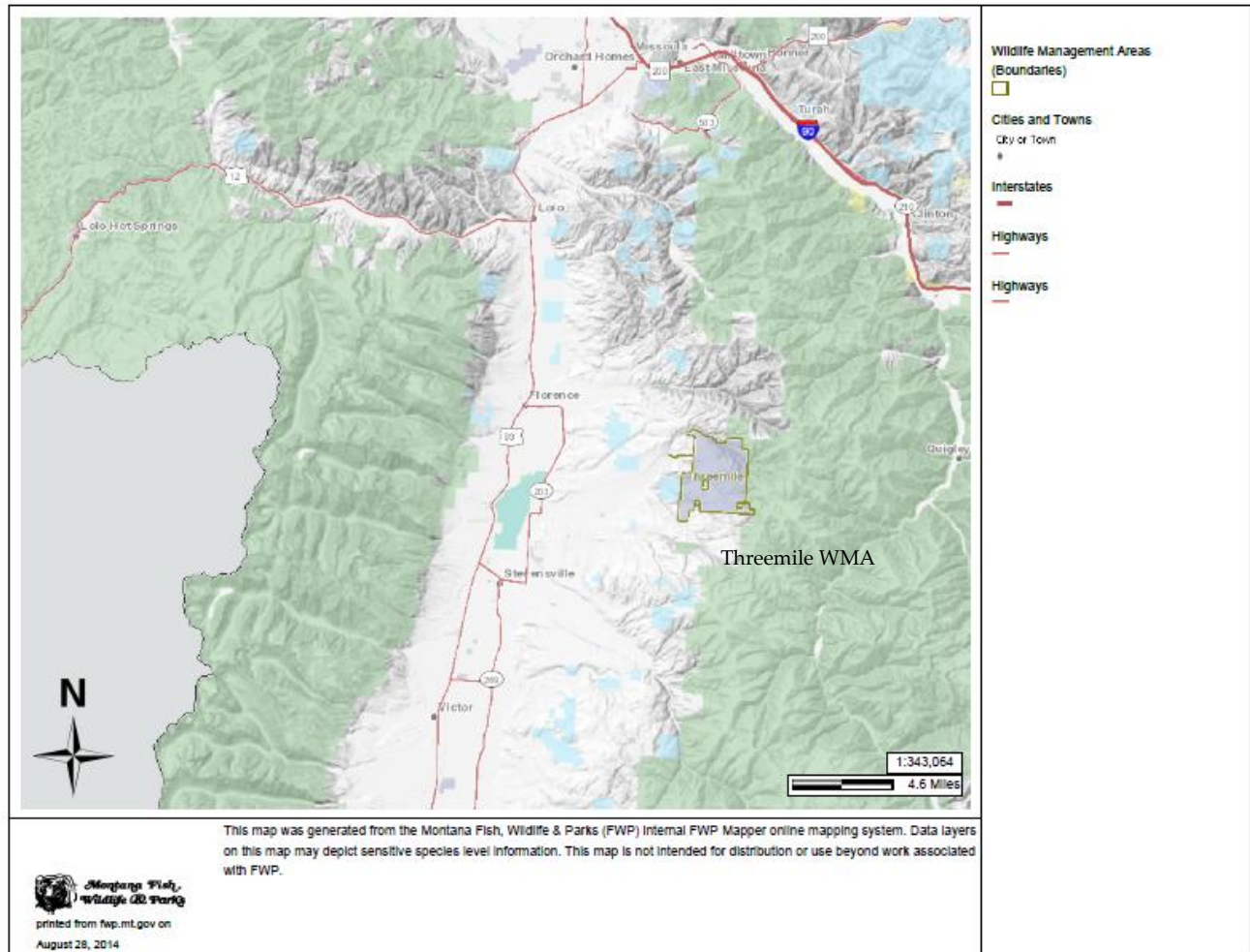


Figure 14. The Threemile WMA, located in Montana's Bitterroot River watershed.

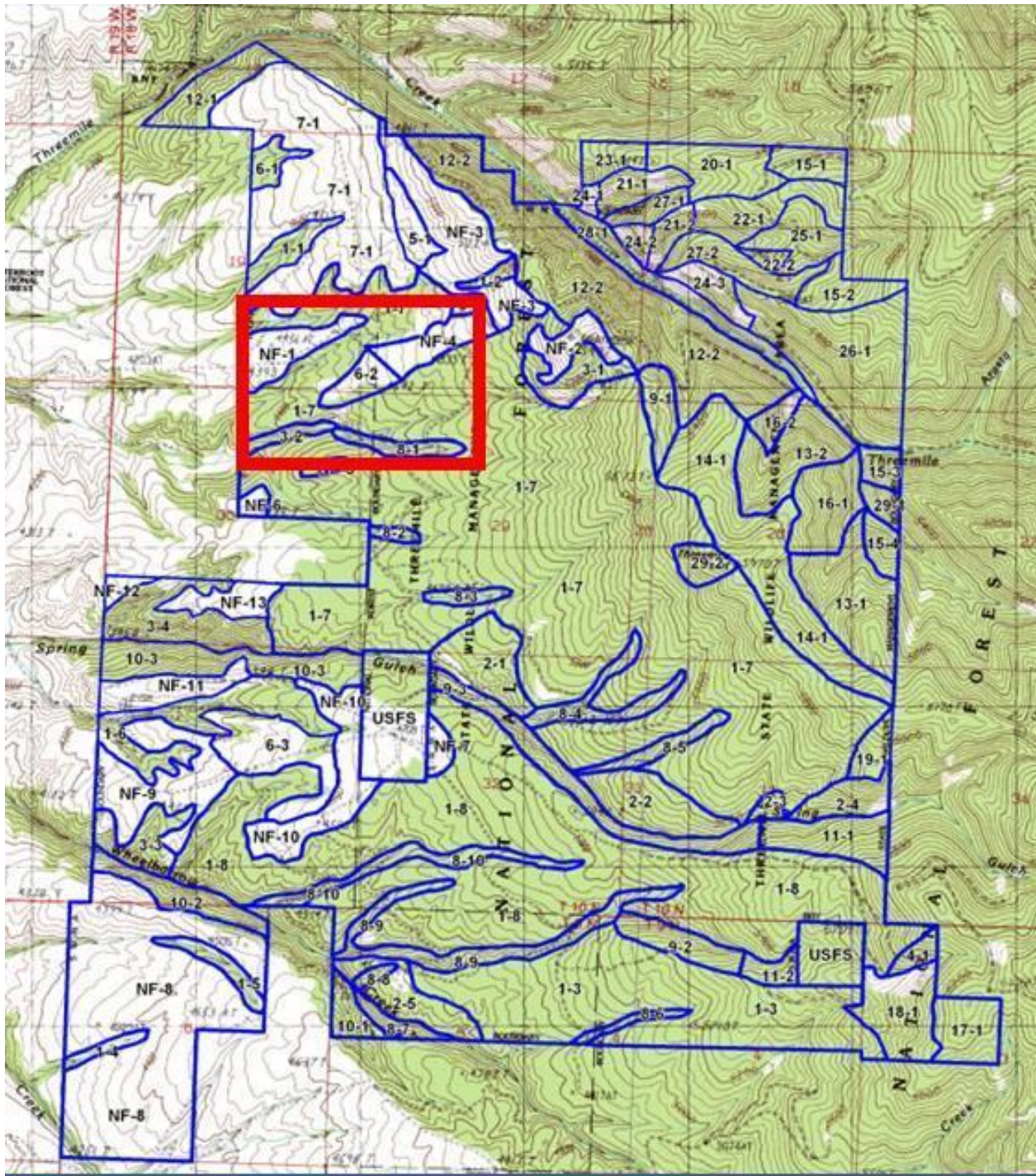


Figure 15. Stand map of the Threemile Wildlife Management Area, with the general location of the proposed habitat improvement project outlined.

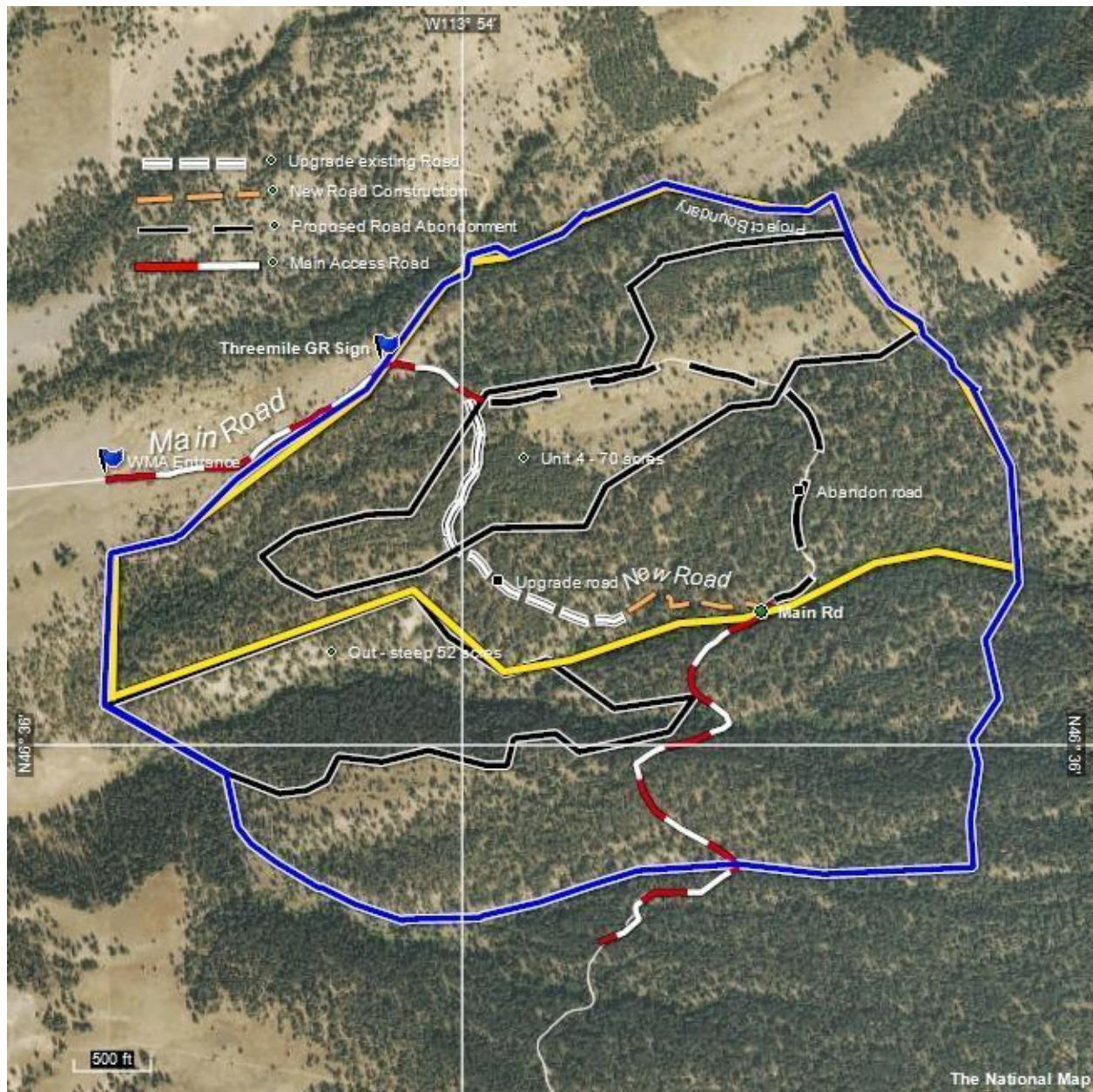


Figure 16. Forested stands proposed for treatment as part of the Threemile Wildlife Management Area Forest Habitat Restoration Project.

6. Project size--estimate the number of acres that would be directly affected that are currently:

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	<u>0</u>
Residential	<u>0</u>		
Industrial	<u>0</u>	(e) Productive:	
(existing shop area)		Irrigated cropland	<u>0</u>
(b) Open Space/	<u>500</u>	Dry cropland	<u>0</u>
Woodlands/Recreation		Forestry	<u>0</u>
(c) Wetlands/Riparian	<u>0</u>	Rangeland	<u>0</u>
Areas		Other	<u>0</u>

8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits:

<u>Agency Name</u>	<u>Permits</u>
None required	

(b) Funding:

Agency Name: Montana FWP

Funding Amount:

Costs to FWP for these forest habitat restoration treatments are expected to be covered by the sale of merchantable timber byproduct. Any revenue in excess of project costs will be deposited into the legislatively-established FWP Forest Management Account to implement further forest management projects pursuant to the provisions of 87-1-201(9)(a)(iv).

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Bitterroot National Forest</u>	<u>Wildland Fire Protection</u>
<u>Ravalli County Weed District</u>	<u>Noxious Weed Control</u>

9. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

The Threemile WMA is located in the Bitterroot Valley of west-central Montana, in Ravalli County, lying on the west slope of the Sapphire Mountains between Eightmile Creek on the north and Ambrose Creek on the south (Figure 14). The nearest communities are Florence and Stevensville. The farming, ranching and recreation/tourism industries support the local economy. Missoula is the nearest major population center, located about 25 miles northwest of the Threemile WMA.

Threemile Point, at 5,964-feet in elevation, is the main topographic feature, and Three Mile Creek is the principal watershed of the WMA (Figure 15).

A migratory elk herd uses the Threemile WMA for winter range. Marcum (1975) documented that this elk herd habitually occupies summer ranges extending into the Welcome Creek Wilderness in the Rock Creek drainage. Thus, changes in elk habitat on the Threemile WMA may directly affect opportunities for the public to hunt and view elk across a much larger area including portions of the Lolo and Bitterroot National Forests and accessible state and private lands. The WMA itself is one of the most heavily-used hunting areas in FWP's Region 2 and FWP has invested considerable effort over the years in providing a satisfactory experience for hunters on the WMA (Thompson et al. 1991).

Portions of the WMA also provide important winter range for migratory and resident populations of mule deer and white-tailed deer. Black bear, mountain lion, wolves, mountain grouse and furbearing species are common on the property.

FWP acquired the Threemile WMA in 1967 to provide winter range for elk that were restored to the Sapphire Mountains earlier in the twentieth century. FWP's management plan for Threemile WMA sets wildlife and wildlife habitat as its first priority, and public access compatible with wildlife needs is second. The stands subject to this proposal lie on the western edge of the WMA at the lower forest edge, and are adjacent to private lands (Figure 15).

The subject stands were historically open grown and dominated by large ponderosa pine with approximately 10% Douglas-fir. Dominant trees were several hundred years old and commonly numbered 10 to 30 trees per acre. Tree size was commonly over 24 inches diameter at breast height (DBH). Structure was uneven-aged in groups. These groups could be several acres in size. The open character of the stand and dominance of ponderosa pine was maintained by frequent low intensity fire occurring every 5 to 10 years. A reconstruction of the historic stand on the site was completed using Government Land Office original survey notes from 1905 (Rich 2011). These notes described distances from surveyed corners and DBH of 48 bearing trees. These notes allow for a reconstruction of the stand as it existed in 1905. This reconstruction is of course only one snap shot in time. Stand conditions change over time. Based on these notes the following estimate of the 1905 stand is as follows.

Range of DBH: 6" to 42"

Average DBH: 21"

Species composition: Ponderosa pine-91%, Douglas-fir-9%

Trees per acre (Greater than 6' DBH): 20

Basal area: 62 sq. ft/acre

Average spacing between trees: 47 feet

Logging in the early 1900s gave rise to the current stands on the site by removing most of the larger trees at the time. This extensive harvesting allowed for germination of new seedlings and release of advanced regeneration that was already established beneath the larger trees. Logging and subsequent fire exclusion allowed a dense even-aged stand to develop. Additional harvesting in the 60s and 70s removed the remaining trees that were not harvested earlier in the century. These removals allowed for additional pockets of new regeneration to become

established and further release of advanced regeneration. It also eliminated nearly all trees over 20 inches DBH from the site. Current stands are predominately composed of dense second growth ponderosa pine and Douglas-fir. Basal area is approximately 160 square feet per acre with 300-400 trees per acre. Diameters range from 5" to 18" DBH, and average approximately 11". Pine beetle mortality is common throughout the area and in some portions of the stand ponderosa pine has been nearly eliminated as a result of past beetle caused mortality. An understory of sapling size Douglas-fir has become established in much of the area, especially where the canopy has been opened up by pine beetle mortality. Quaking aspen is found in several locations—most frequently in and along draw bottoms. In these draws it is found as long stringers and as groves of up to an acre in size. It is also found on several dry south slopes and ridge lines throughout the stand type. In the draw bottoms, stem diameter is up to 14 inches DBH. On the drier sites where it occurs, it is much smaller and is often very decadent or dead. Conifers frequently overtop the aspen except where the aspen grows in a pure grove. This conifer overstory is causing decline in the aspen component of the stand.

Douglas-fir dwarf mistletoe is found in isolated patches, nearly always in the Douglas-fir/Ninebark (PSME/PHMA-PHMA) habitat type. Pine beetle mortality is common throughout the area. Potential for further pine beetle mortality is high. The risk of stand-replacing wildfire is high, as a result of high canopy density, small tree diameter, down fuels and developing ladder fuels.

FWP proposes to mechanically thin the shade-tolerant understory species (primarily Douglas fir and lodgepole pine) from below while favoring retention of older age class ponderosa pine and Douglas-fir. Patches of younger trees and snags will be retained within thinning units to provide cover for wildlife and to more closely mimic vegetative mosaics typical of stands maintained by high frequency, low intensity fire regimes. Any future prescribed fire treatments would be subject to additional public scoping and review. Slash will be piled in places where the least damage to native ground cover would occur, and burned on site when conditions permit.

Access to the treatment units is along the Three Mile Creek Road and upon the existing FWP entrance road and the open road system on Threemile WMA (Figure 16). Approximately 0.45 miles of closed road would be improved, and 0.2 miles of new road constructed to bypass excessively steep grades on the open road system; this improved and new road segment would become the new open road in the Threemile WMA travel plan, and the existing steep road segment (0.7 miles) would be closed and reseeded when work is completed. Because the proposed route would be shorter than the existing open road section, a slight decrease of about 0.05 miles in open road would occur due to this project. Road improvements and construction would occur in the summer of 2015 and forest management activities would not occur during the general big game season.

All harvesting would be done using ground based equipment and would be restricted to slopes less than 35%. The proposed treatments are as follows (please refer to Figure 16):

Unit 1 – 200 acres; 5%-35% slopes.

Current condition – Mature ponderosa pine (PP)/Douglas-fir (DF) with scattered patches of dense Douglas-fir regeneration. Basal area (BA) average of 120 sqft/acre.

Treatment – Proposal is to thin PP to a BA of 20- 40 on the drier slopes and benches. PP stocking would be reduced to approximately 60-80 BA on the wetter slopes and draws. The largest and oldest PP would be favored to leave in all stands. All suppressed and sub-merchantable PP would be removed first before sawtimber sized PP would be cut to meet the BA objectives. Douglas-fir dominated stands would be left untreated. To protect hiding cover, DF advanced regeneration would be protected as well as PP patches that are composed of trees < 4”in diameter. Both PP and DF would be removed within aspen stands and at least 50 feet above the existing stand to encourage recovery and expansion of aspen and brush species.

Unit 2 - 116 acres; 5%-35% slopes.

Similar to the current condition and treatment of Unit 1. This was made a separate harvest unit because it is dependent on the new road being built.

Unit 3 – 62 acres; 5%-35% slopes.

Current condition – Grassland with scattered PP and isolated dense PP poletimber/sapling stands.

Treatment – Proposal is to treat only the isolated dense PP poletimber/sapling stands. All dense stands would be thinned to a 35-50 foot spacing except the stand in the lower 1/3 of the unit surrounding the upgraded road segment (see map). This stand would have irregular, 10-20 foot diameter openings created around designated leave trees scattered throughout the stands to improve stand health while providing hiding and travel cover.

Unit 4 – 76 acres; 30% - 70% slopes.

Current condition – scattered and clumps of mature PP on steep south slope. Thick continuous stands of mature DF with heavy brush and regeneration undergrowth on steep and moderate slopes.

Treatment – these stands would be left untreated to protect secure travel corridors from the lower elevation grasslands to the thickly timbered upper elevations above the harvest units.

General Guidance

- Wildlife habitat comes first.
- Components of wildlife habitat to be left untreated (if existing) or recruited (if not existing) are: coverage of aspen and upland willow, big trees (living and snag recruits), clumps of small regeneration, and dense forest cover in the steeper draws.
- Thinning patterns generally would be derived by first locating leave trees and leave clumps and stands of trees.
- Thinning patterns would result in an irregular mosaic with relatively short sight distances.
- Cut trees would be marked, in collaboration between FWP and DNRC service foresters.
- To the extent possible, burn piles will be located in openings within treated stands where little ground cover currently exists. Openings supporting native rangeland will be avoided.

- Timber harvest is encouraged in winter, when the ground is frozen and snow-covered.
- Timber harvest will not occur in the general big game hunting season.
- Road improvement and construction will occur in summer.
- The segment of existing road to be abandoned will be left in a condition that allows continued travel on foot or horseback, but will be closed to motorized vehicles.
- Roads and harvest will comply with Best Management Practices.
- Control of noxious weeds will be included as part of the treatments.

10. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Alternative A: No Action

If FWP decides not to proceed with the proposed action, no stands on the Threemile WMA would be treated this year. FWP expects that the risk of high-intensity catastrophic wild fire would continue to increase.

Alternative B: Proposed Action

Conduct forested habitat improvement treatments on approximately 400 acres of the Threemile WMA as described in #9, above. Following this action, FWP anticipates that important ungulate winter range condition would improve due to increased grass and woody browse understory recruitment. Treatment would also reduce the risk of high-intensity, stand replacement fire events that would remove the remnant large overstory trees, damage thin organic soils, slow grass and woody browse recruitment, and pose a significant risk to neighboring landowners.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X			
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (attach additional pages of narrative if needed):

Roads would be built or improved to BMP specifications. No impacts to riparian areas would be anticipated and no sediment delivery to or siltation of perennial water bodies will occur.

The abandonment of a 0.7-mile segment of steep road would greatly reduce a chronic source of erosion.

2. <u>AIR</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X			
b. Creation of objectionable odors?			X			
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ***For P-R/D-I projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)		X				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (attach additional pages of narrative if needed):

Much of the slash and residual byproduct generated during the course of the proposed treatments would be burned on-site. The contractor would comply with Ravalli County open burning timing restrictions and comply with inter-agency slash treatment regulations.

3. <u>WATER</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?			X			
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ****For P-R/D-I, will the project affect a designated floodplain? (Also see 3c.)		X				
m. ***For P-R/D-I, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)		X				
n. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (attach additional pages of narrative if needed):

Treating the subject stands may slightly alter the rate and volume of spring runoff and retained snowpack. Given the limited scale of the project and condition of adjacent stands, this effect is expected to be extremely minor.

4. VEGETATION Will the proposed action result in?	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X			
b. Alteration of a plant community?			X			
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X			
f. ****For P-R/D-L, will the project affect wetlands, or prime and unique farmland?		X				
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation (attach additional pages of narrative if needed):

The Project intent is to restore and diversify vegetation to benefit wildlife habitat condition and protect stands from high-intensity wildfire. Please see #9 above for a more detailed description of proposed treatments. Noxious weed spread would be mitigated by minimizing ground disturbance and treating affected areas or areas at risk with herbicide during the Spring of 2015 and 2016.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?			X			
c. Changes in the diversity or abundance of nongame species?			X			
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X			
h. ****For P-R/D-I, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)		X				
i. ***For P-R/D-I, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)		X				
j. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish and Wildlife:

Near Term: Some wildlife would be temporarily displaced from the Project area while treatments are ongoing. Large and mobile species would likely move to secure, adjacent habitat. Bird nesting activity will have been completed before Project initiation and implementation (winter treatments). Winter treatments may attract deer and elk to feed on the felled tops.

Long Term: Habitat for songbirds would be enhanced with the enhancement of aspen communities. More large trees would be recruited over time and will grow larger to provide thermal cover, nesting sites and roosting sites for wildlife, and will eventually develop a snag component that is currently absent. Within two years following treatment the forest would be more resistant to stand replacement fire, would be more likely to benefit from unintended burns, and the existing potential threat of decades-long habitat loss due to unnatural stand replacement would be lessened.

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Increases in existing noise levels?			X			
b. Exposure of people to severe or nuisance noise levels?			X			
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (attach additional pages of narrative if needed):

Logging and trucking equipment would increase noise levels on the Project area while activities are ongoing. Merchantable timber byproducts would be transported out the Three Mile Creek Road and East Side Highway.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (attach additional pages of narrative if needed):

The proposed Project implements the Threemile WMA's Management Plan. The Project Area lies in a matrix of State, federal, and private ownerships that also actively manage their forested lands. The demonstration intent would provide all interested parties with an opportunity to learn and improve practices for managing forests for wildlife.

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?			X			
d. ***For P-R/D-L, will any chemical toxicants be used? (Also see 8a)		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (attach additional pages of narrative if needed):

Timber management activities are inherently dangerous. A DNRC forester would oversee harvest operations and the sale purchaser would be required to enter into a written contract to ensure that safe management practices are in place.

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?			X			
d. Changes in industrial or commercial activity?			X			
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?			X			
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (attach additional pages of narrative if needed):

Jobs would be created or sustained by Project work while the Project is ongoing. Log hauling and contractor traffic would increase during the Project. Roads and other infrastructure that would be used by contractors were designed (and would be maintained) to support commercial logging and log transport activities. It is generally recognized in the professional forestry community that the harvest of a million board-feet of timber equates to 10 man-years of employment.

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?			X			
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?			X			
e. **Define projected revenue sources						
f. **Define projected maintenance costs.						
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (attach additional pages of narrative if needed):

The Project would increase state and local tax revenues from the sale of fuel and equipment and from employees' income. Fuel and electricity would be required to treat stands and process timber byproducts.

The abandonment of the 0.7-segment of steep road would reduce the existing road maintenance burden.

** 11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X			
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)		X				
d. ***For P-R/D-I, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c.)		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (attach additional pages of narrative if needed):

Some treated stands would be visible from the FWP open road system. The Project's intent is to restore stands to more closely approximate historic conditions. A steep stretch of the existing open road system would be closed and re-seeded, which would reduce runoff and erosion. The risk of catastrophic wildfire, which would also modify the scenic vista, would be reduced.

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ****For P-R/D-I, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)						
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (attach additional pages of narrative if needed):

SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u>	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. *** <u>For P-R/D-I</u> , is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)		X				
g. **** <u>For P-R/D-I</u> , list any federal or state permits required.						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Significance Criteria (attach additional pages of narrative if needed):

This project would improve ungulate habitat conditions and reduce the risk of high-intensity wildfire on and adjacent to the Threemile WMA.

PART III. NARRATIVE EVALUATION AND COMMENT

Montana Fish, Wildlife & Parks (FWP) proposes to thin up to 400 acres of forest on the Threemile Wildlife Management Area (WMA), in Ravalli County. If approved by the Montana Fish and Wildlife Commission, the work would begin as early as June 2015. The purpose is to improve wildlife habitat; this project would not be proposed if not for a need to conserve and improve wildlife habitat on the WMA.

Historic timber harvest practices, fire exclusion and the lack of forest management in recent decades have set the stage for a potential long-term loss of wildlife and wildlife habitat on Threemile WMA. Of foremost concern, when a wildfire occurs in the future, is the increased likelihood of a stand-replacement event. This forest evolved with a natural cycle of frequent, low intensity fires that minimized stand replacement events and promoted the retention and recruitment of large trees in open stands (Rich 2011). Decades of fire prevention and suppression, coupled with historic, high-grade harvesting and a lack of subsequent management to restore a natural stand structure, have increased the vulnerability of the forest to fires that once burned beneficially (Rich 2011). FWP would like to thin some forest stands in the coming months to increase the probability of larger trees surviving the inevitable lightning or human-caused fire in the future. Otherwise, a wildfire is likely to burn much hotter than would have naturally occurred, reaching the forest canopy and more deeply into the mineral soil, thus removing most or all of the existing forest structure, to the detriment of many wildlife species on the WMA. The recommended forest management project is not intended to significantly reduce or eliminate fire risk—wildfire is natural and inevitable—but is intended and would be designed to improve tree survival in the event of a fire.

Increased stand density on the dry west, southwest and south-facing slopes of the WMA creates moisture stress that inhibits the growth and recruitment of old, large ponderosa pine and Douglas-fir trees—those features of importance as elk thermal cover in winter and as living or future-dead wildlife trees. Aspen, upland willow and other deciduous trees and shrubs, which add habitat and wildlife species diversity, are being shaded out by the increasing conifer densities on some sites. FWP would prescribe thinning in a pattern that would promote moisture delivery in stands with the greatest growth and survival potential, and in places where aspen and other deciduous plants would benefit from thinning the forest canopy and disturbing the plants themselves to promote sprouting.

Equally important as the treatment are the stands within the project area that would not be treated. Forests in the riparian bottoms and on steep, north-facing slopes along the draws would be left standing, including a mix of larger Douglas-fir and spruce, and thickets of shrubs and shade-tolerant conifer regeneration. These important features of the overall wildlife habitat would remain irregularly interspersed with treated stands to maintain a functional mosaic of forest structures for a diversity of wildlife. Among other values, these stands are used by elk for winter thermal cover, and in combination with large pine and Douglas-fir boles on the adjacent, south-facing slopes provide diverse habitats in close proximity, which allow wintering elk to minimize their exposure to wind or maximize their exposure to the sun and reflected solar radiation, as conditions vary (Beall 1974).

FWP proposes to begin forest management on a small scale, with the idea that this initial treatment would serve as a demonstration for FWP to evaluate and learn from, and for the public to react to, before proposing any further forest management projects on Threemile WMA in the future. FWP would involve only about 500 acres—about 10% of the forested acres on the WMA—in this demonstration (which includes untreated acres within the project area). The project area would be contiguous and blocked in the north half of the WMA, which would minimize and confine the operational disturbance and leave most of the WMA unaffected. Any future forest management projects would be proposed and released for public review and comment at a later date, and no-action would remain a viable alternative at that time.

As the habitat manager, FWP would decide which trees would be removed, and which would be left standing, along with all other aspects of the forest management prescription. However, FWP has developed this proposal in partnership with the Montana Department of Natural Resources and Conservation (DNRC) and its Forestry Assistance Program to incorporate the professional forestry expertise that exists there. The role of DNRC foresters has been to hear FWP's purposes and goals, and to translate them into forest management prescriptions that are silviculturally sound and feasible. Project development has been a continual process of trial and feedback, and trial again, to meet wildlife needs and address wildlife opportunities first. If the Fish and Wildlife Commission ultimately approves a final project proposal this fall, a DNRC forester would serve as the project administrator—in the field and in day-to-day contact with the tree-harvesting contractor—to ensure that the management prescription is followed and that any issues are addressed as they arise.

PART IV. PUBLIC PARTICIPATION

1. Describe the level of public involvement for this project if any, and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The public will be notified in the following manners about the opportunity to comment on this current EA, the proposed action and alternative:

- Legal notices will be published once in each of these newspapers: *Bitterroot Star* (Stevensville), *Independent Record* (Helena), *Missoulian*, and *Ravalli Republic* (Hamilton)
- Public notice will be posted on FWP's webpage: <http://fwp.mt.gov> ("News," then "Public Notices"). The Draft EA will also be available on this webpage, along with the opportunity to submit comments online.
- A news release will be prepared and distributed to a standard list of media outlets interested in FWP Region 2 issues; this news release will also be posted on FWP's website <http://fwp.mt.gov> ("News," then "News Releases").
- Direct mailing or email notification will be made to adjacent landowners and other interested parties (individuals, groups, agencies) to ensure their knowledge of the proposed project.

Copies of this draft EA may be obtained by mail from Region 2 FWP, 3201 Spurgin Rd., Missoula 59804; by phoning 406-542-5540; by emailing shrose@mt.gov; or by viewing FWP's Internet website <http://fwp.mt.gov> ("Public Notices," beginning February 9, 2015).

Comments should be directed by: mail to FWP Region 2, Attn: Sharon Rose, 3201 Spurgin Road, Missoula, MT 59804; phone to 406-542-5540; or email to shrose@mt.gov. **Comments must be received by FWP no later than 5:00 p.m. on March 10, 2015.**

This level of public notice and participation is appropriate for a project of this scope having limited impacts, many of which can be mitigated.

PART V. EA PREPARATION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.**

No. Based upon the above assessment which has identified a limited number of minor impacts to the physical and human environment that will be either for a short duration or that the affects of the propose project can be mitigated below the level of significance, an EIS in not required and an environmental assessment is the appropriate level of review.

- 2. Name, title, address and phone number of the person(s) responsible for preparing the EA:**

Mike Thompson
Regional Wildlife Manager
FWP, Region Two
3201 Spurgin Road, Missoula MT 59804
(406) 542-5516

- 3. List of entities consulted during preparation of the EA:**

Montana Department of Natural Resources and Conservation (DNRC), Missoula and Hamilton

REFERENCES CITED

Beall, R. C. 1974. Winter habitat selection and use by a western Montana elk herd. PhD dissertation, University of Montana, Missoula. 197pp.

Marcum, C. L. 1975. Summer-fall habitat selection and use by a western Montana elk herd. PhD dissertation, University of Montana, Missoula. 188pp.

Rich, R. M. 2011. A century of change in forest structure and fire regime condition class in a western Montana ponderosa pine / Douglas-fir forest. MS Thesis, University of Montana, Missoula. 68 pp.

Thompson, M. J., R. E. Henderson, and R. Ortegon. 1991. Do hunters support road closures to address elk security problems? Pages 275-279 in A. G. Christensen, L. J. Lyon, and T. N. Lonner, compilers. Proceedings of elk vulnerability—a symposium. Montana State University, Bozeman.